

because an unsaturated epoxide and unsaturated carboxylic acid must possess a non-polymerized unsaturated moiety.

Applicants respectfully traverse these rejections.

Regarding the first assertion, Applicants respectfully submit that other forms of (A) can be found in the specification at page 3, line 38 - page 4, line 4, and page 4, lines 23-24. In addition, additional examples of (C) can be found in the specification at page 5, lines 11-17.

Regarding the second assertion, Applicants respectfully submit that generic terminology may be found in the specification at the paragraph bridging pages 1 and 2 of the specification as well as page 2, lines 3-10.

Regarding the third assertion, Applicants respectfully submit that the Patent Office has failed to 1) provide any evidence or reasoning of why a non-polymerized glycidyl (meth)acrylate as (A), ethylene-maleic anhydride copolymer as (B) and non-polymerized (meth)acrylic or maleic acid as (C) would questionably provide a crosslinked phase, and thus, 2) rebut the presumption that Applicants' disclosure is accurate. *See In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971) and M.P.E.P. §2164.04. Even assuming what the Office alleges is true, the presence of inoperative embodiments within the scope of a claim does not necessarily render a claim nonenabled. The standard is whether a skilled person could determine which embodiments that were conceived, but not yet made, would be inoperative or operative with expenditure of no more effort than is normally required in the art. *See Atlas Powder Co., v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1577, 224 USPQ 409, 414 (Fed. Cir. 1984) and M.P.E.P. §2164.08(b).

Regarding the fourth assertion, an epoxide is an organic compound containing a reactive group resulting from the union of an oxygen atom with two other atoms (usually carbon). Furthermore, a carboxylic acid is any of a broad array of organic acids. See attached *Hawley's Condensed Chemical Dictionary*, 13th Edition, 1997. There is no requirement that an epoxide or an organic compound be a non-polymerized unsaturated moiety.

Furthermore, (A) can be the copolymers of ethylene and of an unsaturated epoxide, such as copolymers of ethylene, of an alkyl (meth)acrylate and of an unsaturated epoxide (specification, page 3, line 38 - page 4, line 1), and (C) can be a copolymer of ethylene and of (meth)acrylic acid. There is no inconsistency because an unsaturated epoxide (A) or unsaturated carboxylic acid (C) may be, for example, a copolymer having unsaturated terminal groups. Thus,

a copolymer may fall within the generic categories of unsaturated epoxide (A) and unsaturated carboxylic acid (C).

Furthermore, the test for enablement is whether one skilled in the pertinent art can make and use the claimed invention without **undue** experimentation (*In re Wands*, 858 F.2d at 731, 737, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988) and M.P.E.P. §2164.01). The fact that experimentation may be complex does not necessarily make it undue, if the art typically engages in such experimentation (*Massachusetts Institute of Technology v. A.B. Fortia*, 774 F.2d 1104, 227 U.S.P.Q. 428 (Fed. Cir. 1985) and M.P.E.P. §2164.01). The undue experimentation factors (M.P.E.P. §2164.01(a)) include:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

All the factors must be considered when determining whether the claims are enabled (M.P.E.P. §2164.01(a)). In this case, specific Examples are provided at pages 7-8, as well as illustrative embodiments of (A), (B), and (C) at page 3, line 16 - page 5, line 24. Such working examples and other guidance would enable one skilled in the art to practice the invention without undue experimentation, and thus, it is respectfully submitted that the rejection under 35 U.S.C. §112, first paragraph, should be withdrawn.

**Rejections Under 35 U.S.C. §112, Second Paragraph to Withdrawn Claims**

Claims 21, 22 *sic*, 25-29, 35, 37, 39 and 40 are allegedly indefinite. Applicants respectfully traverse this rejection and reserve the right to respond once these claims are rejoined to the allowed claims.

Claim Rejections Under 35 U.S.C. §103

Claims 20, 23, 32 and 38 are allegedly unpatentable over U.S. Pat. No. 5,395,881 (Spelthann). The Office admits the prior art terpolymer containing an unsaturated carboxylic acid is not exemplified, but alleges it would be obvious to incorporate a carboxylic acid monomer in order to facilitate the curability. Applicants respectfully traverse these rejections.

Spelthann discloses a polyolefin composition (column 1, lines 7-9). The polymer composition is a blend of a first thermoplastic polymer component and a second polar thermoplastic polymer component (column 1, lines 25-37).

The first thermoplastic polymer component includes a) a non-polar thermoplastic polyolefin; and (b) a compatibilizing polymer which is an olefin polymer containing a copolymerized polar monomer, and a carboxylic acid or a derivative thereof. The derivative may be an anhydride (column 3, lines 36-40).

The second polar thermoplastic polymer component includes a) a polar ethylene copolymer and (b) a polar ethylene compatibilizing copolymer. The polar ethylene copolymer consists essentially of (i) ethylene, (ii) at least one copolymerizable, ethylenically unsaturated organic compound, and (iii) carbon monoxide. Column 1, lines 36-44. The copolymerizable, ethylenically unsaturated organic compound is a termonomer containing unsaturated mono- and dicarboxylic acids of 3-20 carbon atoms, esters of such unsaturated mono- or dicarboxylic acids, vinyl esters of saturated carboxylic acids wherein the acid group has 1-18 carbon atoms, vinyl alkyl ethers wherein the alkyl group has 1-18 carbon atoms, acrylonitrile, methacrylonitrile, copolymerizable unsaturated hydrocarbons such as alpha-olefins of 3-12 carbon atoms, ring compounds such as norbornene and vinyl aromatic compounds. Column 4, lines 27-37. More preferred copolymers include those in which vinyl acetate, an alkyl (1-8 carbons) acrylate or alkyl methacrylate (particularly n butyl acrylate) is the termonomer. Column 4, lines 44-47. Exemplary termonomers are n-butylacrylate *sic*. Column 5, lines 60-65.

The polar ethylene compatibilizing copolymer consists essentially of (i) ethylene, (ii) optionally at least one copolymerizable, ethylenically unsaturated organic compound, and glycidyl acrylate or methacrylate. Column 1, lines 45-52. The optional copolymerizable, ethylenically unsaturated organic compound of the compatibilizing copolymer is methyl acrylate, or most preferably n-butyl acrylate. Column 4, line 66 - column 5, line 8.

However, to establish *prima facie* obviousness of a claimed invention, all claim features

must be taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), M.P.E.P. §2143.03. Moreover, the fact that a claimed feature might be found within the broad field of the prior art and one might arrive at it by selecting specific items and conditions does not render that feature obvious in the absence of some direction or reason for making the selection. See *Ex parte Koon*, 132 U.S.P.Q. 359 (Pat. Bd. of App. 1962) and *In re Baird*, 29 U.S.P.Q. 2d 1550 (CAFC 1994).

Spelthann discloses a polymer composition blend of two polymer components. The first polymer component includes (1) a compatibilizing polymer which is an olefin polymer containing a carboxylic acid or a derivative (anhydride). The second polymer component includes (1) a polar ethylene copolymer consisting essentially of ethylene, at least one copolymerizable, ethylenically unsaturated organic compound, and carbon monoxide; and (2) a polar ethylene compatibilizing copolymer consisting essentially of ethylene, optionally at least one copolymerizable, ethylenically unsaturated organic compound (an acrylate), and glycidyl acrylate or methacrylate.

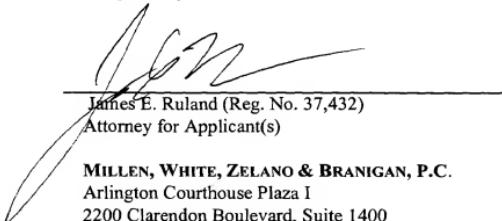
But Spelthann utterly fails to teach or suggest a thermoplastic polymer having incorporated therein a crosslinked phase, much less a crosslinked phase from a reaction of:

- (A) an unsaturated epoxide or a compound different from said unsaturated epoxide and having 2 epoxide functional groups,
- (B) a copolymer of ethylene and an unsaturated carboxylic acid anhydride, and
- (C) an unsaturated carboxylic acid or an  $\alpha,\omega$ -aminocarboxylic acid.

With respect to the (1) polar ethylene copolymer, Spelthann fails to teach or suggest including an unsaturated carboxylic acid anhydride, and fails to provide sufficient blazemarks or guideposts to motivate one of ordinary skill to use an unsaturated mono- and dicarboxylic acid as the at least one copolymerizable, ethylenically unsaturated organic compound. Rather, Spelthann prefers vinyl acetate, an alkyl (1-8 carbons) acrylate or alkyl methacrylate and exemplifies n-butylacrylate. Thus, there is insufficient motivation for one of skill in the art to modify Spelthann to render the claimed invention *prima facie* obvious.

In view of the above remarks, favorable reconsideration is courteously requested. If there are any residual issues which can be expeditiously resolved by a telephone conference, the Examiner is courteously invited to telephone Counsel at the number indicated below.

Respectfully submitted,



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